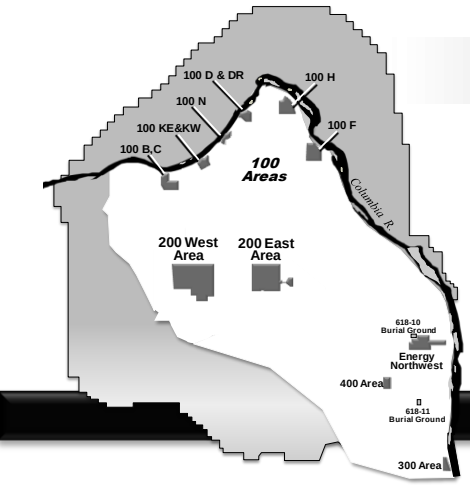


TPA Agencies Propose Extending a Groundwater Barrier to Further Protect the Columbia River

U.S. Department of Energy ▪ Washington State Department of Ecology ▪ U.S. Environmental Protection Agency

The U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency (EPA), and the Washington State Department of Ecology – the Hanford Site Tri-Party Agreement agencies – are proposing to amend a 1999 interim action Record of Decision (ROD) for contaminated soil and groundwater in the northern area of the Hanford Site along the Columbia River. The proposal includes building a barrier to prevent strontium-90 from entering the Columbia River and removing the existing pump-and-treat system's treatment facility and piping. The Proposed Plan for Amendment of 100-NR-1/NR-2 OU Interim Action Record of Decision (DOE/RL-2009-54) is being issued for a 30-day public comment period June 21- July 22, 2010. The agencies invite your input on this proposed plan.

Background

The 100-NR-1 and NR-2 Operable Units are areas of contaminated soil and groundwater resulting from past operations and waste-handling practices at the 100-N Reactor. While the reactor was in operation, large volumes of cooling water were discharged directly to the soil, contaminating the groundwater flowing toward the Columbia River. The main contaminant is strontium-90.

The 1999 interim action ROD called for continued operation of the existing pump-and-treat system to remove strontium-90 from contaminated groundwater and also for evaluation and testing of additional technologies. In 2006, DOE built a 300-foot apatite barrier to determine the effectiveness of this technology on strontium-90.

What is an apatite barrier?

Apatite is the name of a common type of mineral found in bones and rocks. Apatite is a very stable mineral that has the ability to capture and hold radioactive and metal contaminants. A barrier is created by injecting the apatite or apatite-forming chemicals into the ground. This creates a barrier that prevents the strontium-90 from migrating to the river.

What Cleanup Actions Were Evaluated?

Five remedial action alternatives were evaluated in the proposed plan with the overall goal of reducing strontium-90 flux to the Columbia River. These alternatives included:

No Action Alternative

Alternative 1 – Institutional Controls and Monitored Natural Attenuation

Alternative 2 – Resume Operation of Existing Pump-and-Treat System

Alternative 3 – Impermeable Barrier

Alternative 4 – Apatite Permeable Reactive Barrier.

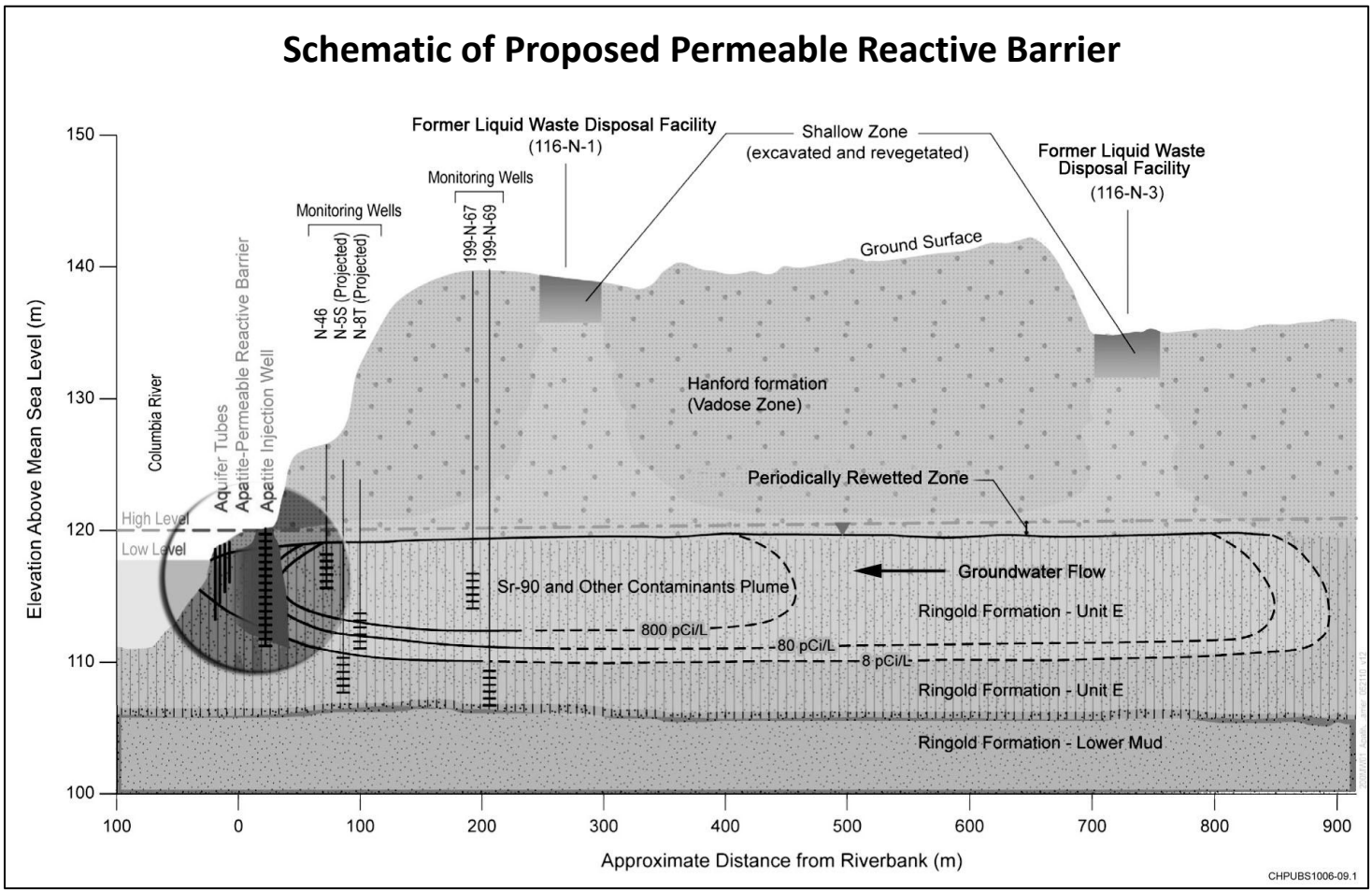
Under Alternative 4 (the preferred alternative), the apatite permeable reactive barrier would be extended from its current length of 300 ft to approximately 2,500 ft to span the width of the area where strontium-90 concentrations in groundwater exceed the EPA drinking water standard.

The extended permeable reactive barrier would provide increased protection for the Columbia River by immobilizing strontium-90 across a broad section of the shoreline to reduce the amount of strontium-90 that reaches the river.

Public Comment Period

The Public Comment Period for the *Proposed Plan for Amendment of 100-NR-1/NR-2 OU Interim Action Record of Decision* will run from ***June 21 – July 22, 2010***

Tri-Party Agreement
U.S. Department of Energy
Washington State Department of Ecology
U.S. Environmental Protection Agency



The strontium-90 would remain bound within the permeable reactive barrier's apatite matrix, where it would naturally decay to concentrations that reduce the threat to human health and the environment. As part of the preferred alternative, DOE would also decommission the treatment components of the existing 100-NR-2 Operable Unit groundwater pump-and-treat system, which was placed in standby mode in 2006.

What is Being Proposed?

Based on the results of these evaluations, the amendment to the interim action ROD proposes to:

- Construct a subsurface permeable reactive barrier to immobilize strontium-90 present in soil and groundwater, and reduce its flux to the Columbia River through groundwater flow.
- Decommission the existing pump-and-treat system's treatment facility and conveyance piping.

How Can You Become Involved?

The TPA agencies are seeking public input on the remedial action alternatives considered and the preferred alternative recommended for implementation in this Proposed Plan. The public comment period for this document will run from June 21 through July 22 2010. The agencies would like your feedback and will consider all comments before finalizing this proposed plan.

Please submit comments by July 22, 2010 to:

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Richland. WA 99352
Email: 100NRPP@rl.gov

This Proposed Plan can be viewed on line at
http://www.hanford.gov under Hanford Events Calendar.
To access the document, click on More Event Calendar.
Select any date during the June 21 to July 22 timeframe.
Click on: Public Comment Period on *The Proposed Plan for Amendment of 100-NR-1/NR-2 OU Interim Action Record of Decision*

The documents are also available for review at the Public Information Repositories listed below.

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Suzallo Library
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Attn: David Maack (206)543-4664
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Portland
Portland State University
Bradford Price Millar Library
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Richland
U.S. Department of Energy Public Reading Room
Washington State University, Tri-Cities
Consolidated Information Center, Room 101-L
2770 University Drive
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